

**PET DIAPER GARMENT**

The present application is a continuation-in-part  
5 application of United States Patent Application No.  
10/702,627, filed November 6, 2003, which is a divisional  
application of United States Patent Application No.  
10/428,589, filed May 2, 2003, now U.S. Patent No.  
6,675,745.

10 The present invention relates to a pet diaper  
garment. More particularly, the pet diaper garment  
includes a customizable tail opening and customizable bib  
strap that are effective for allowing the garment to be  
easily customized to securely and comfortably fit an  
15 animal.

**BACKGROUND**

As a result of advanced age or medical condition,  
pets, such as dogs and cats, may exhibit a permanent or  
20 temporary inability to control their waste discharges,  
particularly urinary discharges, leading to numerous and  
problematic "accidents" in the home, automobile, etc.  
The same situation can arise, whether in animal hospitals  
or later in the home, following particular forms of  
25 surgery performed on the pets. Accidents of this nature  
also are common in very young animals, particularly dogs,  
during their training period. Apart from such  
situations, there often exists other instances where a  
means for preventing accidents of this nature is  
30 desirable, such as for dogs left unattended for extended  
periods in the home, or dogs owned by persons residing in  
apartments who cannot immediately access outdoor areas,  
or the like.

A number of pet diapers are available. However, these diapers tend to be very ineffective as they do not securely fit the animal. For example, when a pet diaper is applied to an animal having a small tail, the  
5 clearance between the tail and the tail hole tends to be too large. The clearance may allow solid and fluid waste to escape.

Often times a pet diaper forms gaps or even falls off the animal. Some diapers are secured to the animal  
10 with suspenders or belts. The suspenders may be uncomfortable or may not provide the desired secure fit because they do not always match the shape of the animal.

#### **SUMMARY**

The present invention is directed to a pet diaper  
15 garment for use with four legged domestic animals such as dogs or cats, or two legged animals, having incontinency problems due to age or illness. The diaper garment may also be used to prevent accidents which may occur when the animal is left alone for extended periods of time or  
20 when the animal is still being trained and for female dogs in heat. The pet diaper garment is also effective for use as a physical barrier for avoiding pregnancy. The garment is especially effective as it may be easily customized by the user to securely and comfortably fit  
25 onto the animal.

The pet diaper includes an absorbent garment portion that encircles the animals torso, and a bib strap that helps to secure the absorbent garment to the animal. The absorbent garment portion includes a back section having  
30 an absorbent pad covering a rear section of the animal, a front section having an absorbent pad covering an abdominal area of the animal, and stretchable side sections connecting the back and front sections to form a top section. The absorbent garment portion may also

include an elastic waist band effective for securing the absorbent garment portion to the animal.

5 The back section of the absorbent garment portion includes perforations that are effective for allowing a user to easily locate and create a customized tail opening at the base of the animal's tail. The customized tail opening accommodates the animal's tail, affords greater comfort to the animal, and reduces the risk that waste material will escape.

10 In one aspect of the invention, the absorbent garment portion may be formed as a single piece. In this aspect, the absorbent garment portion may be put onto the animal by inserting the animal's legs into leg openings and then pulling the absorbent garment around the  
15 animal's torso. An opening may be formed in the back section of the absorbent garment by opening perforations in the back section which match the position of the animals tail.

In another aspect of the invention, the absorbent  
20 garment portion may open along its top section where the stretchable side sections are joined. In this aspect, the absorbent garment portion may be put onto the animal by inserting the animal's legs into leg openings and then pulling the absorbent garment around the animal's torso  
25 and securing the side sections together to form a top section. The opening along the top section may be extended by opening perforations in the back section further such that the back and side sections can be closed to securely encircle the animals tail.

30 The pet diaper garment also includes a bib strap that helps to secure the absorbent garment to the animal. The bib strap includes a single strap section that is attached to the front section of the absorbent garment. The bib strap includes perforations that allow the strap  
35 to be separated into two sections. The two separated sections may extend around the animals neck and front

section and connect with the back section of the absorbent garment. In alternative aspects of the invention, the bib strap may separate to encircle the animal's neck area and then connect to the back section  
5 of the absorbent garment in two areas, or the bib strap may rejoin after encircling the animal's neck area and then connect to the back section of the absorbent garment. The bib strap may be formed out of elastic material to further help secure the absorbent garment  
10 portion securely to the animal.

The present invention also provides a method for containing waste discharges from pets. In accordance with the method, the absorbent garment of the invention is encircled around an animal's torso. A tail opening is  
15 located and created through perforations in the back section of the absorbent garment and the back section is positioned around the animal's tail. The absorbent garment is further secured to the animal with the bib strap. The bib strap may be separated into two sections  
20 and extended around the neck and front of the animal. The bib strap is then connected to the top section of the absorbent garment.

#### **BRIEF DESCRIPTION OF THE FIGURES**

Figure 1 shows component parts of the pet garment.

25 Figure 2 shows component parts of the pet garment.

Figure 3 is a side view of a dog wearing the pet garment.

Figure 4 is a bottom view of a dog wearing the pet garment.

30 Figure 5 is a top view of a dog wearing the pet garment.

Figure 6 is a top view of a dog wearing the pet garment.

35 Figure 7 is a back view of a dog wearing the pet garment.

## DETAILED DESCRIPTION

The present invention provides a diaper garment for household pets that securely fits the pet body without causing discomfort to the pet and without being perceived by the pet as an annoyance. The secure fit is aided through the combination of the customizable tail opening in the absorbent garment and the customizable bib strap.

### Absorbent Garment

As shown in Figures 1 and 2, the pet diaper garment 10 of the present invention includes an absorbent garment 20. The absorbent garment 20 includes a back section 30, a front section 40, and stretchable side sections 50 which join to form a top section 60 (shown in Figure 3). The back section 30 may include back section perforations 70. The absorbent garment 20 also includes leg openings 80 that may be defined at least in part by circumferentially disposed elastic material 90. The absorbent garment 20 may be further secured around the animals legs with a snap closure 400 (shown in Figures 9 and 10).

The absorbent garment 20 may also include an elastic waist band 100. In an important aspect, the absorbent garment 20 does not include a belt, As used herein, "no belt" means that the absorbent garment 20 does not include a waist band, elastic or otherwise, that is removable from the absorbent garment 20.

The back 30 and front section 40 may be formed from an integral unitary material, or may be formed by attachment together of separate back 30 and front 40 sections which can be made of the same or different materials. The absorbent garment 20 includes stretchable side sections 50 adapted to engage the flank areas of the animal. The side sections 50 can be separate components one from the other, and which are attached to respective

edge areas of the back 30 and front 40 sections. The side sections 50 may be made of the same or different material used in making the back 30 and front sections 40. The side sections 50 are made of material having  
5 elasticity so as to permit a snug fit along the flanks of the animal while at the same time permitting appropriate expansion so as to not interfere with breathing or other normal body movements.

As shown in Figure 6, the absorbent garment 20 may  
10 open along the back section. Side section 50 may be joined by connection, such as Velcro, to secure the absorbent garment to the animal and to provide a secured customized fit around the animal's tail. Alternatively, the absorbent garment 20 may open along a side section 50  
15 at side opening 350 (shown in Figure 11). Side opening 350 may be closed using connectors such as Velcro.

The absorbent garment 20 includes an absorbent material positioned on its inner face which is effective for absorbing liquid waste from the animal or for  
20 containing solid waste. The absorbent garment 20 may include an inner permeable sheet made of non woven fabric, an outer waterproof sheet made of synthetic resin and absorbent material located between the inner and outer sheets.

25 In one aspect of the invention, the absorbent garment 20 is completely detachable from the bib strap 110. Alternatively, the absorbent garment 20 may be permanently attached to the bib strap 110. In this aspect, the absorbent garment 20 may include removable  
30 absorbent pads.

#### Bib Strap

As shown in Figures 1 and 2, the pet diaper garment 10 of the present invention includes a bib strap 110. The bib strap 110 includes a first single strap section 120  
35 that is connected to the front section 40. In one

embodiment, the first single strap section 120 may connect to the entire width of the front section 40 (Figure 4). In an alternative aspect, a smaller portion of strap section 120 may be attached to a portion of the front section 40 which is less than the entire width of the front section. The single strap section 120 may be permanently attached to the front section 40 such as, for example, with stitching. Alternatively, the single strap similarly may be removably attached to the front section 120, such as, for example, with Velcro. The first single strap section 120 includes strap perforations 130. The perforations 130 allow the single strap section 120 to be separated into separate strap sections 140 or shoulder straps. In an alternative aspect of the invention shown in Figure 2, the separate strap sections 140 or shoulder straps may rejoin to form a second single strap section 150 and define head opening 160. As shown in Figure 5, the single strap section 150 may be rejoined with the absorbent garment 20, with a connector, for example, Velcro.

As shown in Figure 7, the shoulder straps 140 of the bib strap 110 may rejoin at a connector 200 and extend to connect to the absorbent garment 20. The connector 200 may be any type of connector known in the art.

In an alternative aspect shown in Figure 12, the bib strap 110 may be reversibly attached or connected to the absorbent garment 20. The bib strap 110 may be reversibly connected through a reversible connector 300. One of example of a reversible connector 300 is a Velcro type connector which allows the bib strap 110 to be connected, adjusted, and subsequently removed from the absorbent garment 20. The type of bib strap 110 utilized may be the type shown in Figure 12 and could also be the type of bib strap 110 shown in Figure 13. The bib strap shown in Figure 13 includes a head opening 160 and the reversible connectors 300.

## Fabric

One fabric-like material that has been used successfully in prototypes of the invention and that possesses the requisite elasticity is understood to be referred to as DeMique (trademark of Kimberly-Clark Corporation, Neenah, Wis., for elastic nonwoven fabric) material or material that has been manufactured by a DeMique process. The secure fit of the diaper garment, without discomfort, is additionally aided in the preferred embodiments through the use of circumferential elastic material for the leg and tail openings.

In another aspect, the fabric used in the pet diaper garment may include a four-way stretch material. The four-way stretch material includes a tight-weave, four-way stretch fabric consists of about an eight (8) ounce tricot weave from about seventy-five (75) percent to about eighty-five (85) percent nylon fiber, and from about fifteen (15) percent to about twenty-five (25) percent segmented polyurethane fiber, such as spandex or elastane. This composition yields elasticity stretch factors of about ninety (90) to about one-hundred twenty (120) percent longitudinally, with a maximum stretch of about two-hundred twenty (220) percent, and about sixty (60) to about one-hundred (100) percent latitudinally, with a maximum stretch of about two-hundred (200) percent. In an alternative aspect of the invention, a polyester fiber may be substituted for the nylon fiber.

The elasticity of this fabric allows the garment to be easily put on and removed from the animal, and allows the animal substantial freedom of movement. Moreover, this fabric retains its shape after repeated washing and continued wear.

In an alternative aspect of the invention, the protective garment may include a weave such as Raschel with the percentages of the other materials remaining the same.



### Connectors

In another important aspect of the invention, the garment closes with fasteners, for example, hook and loop  
5 fasteners like the fasteners sold under the trademark "Velcro", positioned as shown. As shown in Figure 7, the shoulder straps 140 of the bib strap 110 may be adjustably joined with a connector 200. The connector 200 may be any connector known in the art for the purpose  
10 of joining or restraining straps, such as for example suspender straps and S-shaped straps.

Numerous modifications and variations in practice of the invention are expected to occur to those skilled in the art upon consideration of the foregoing detailed  
15 description of the invention. Consequently, such modifications and variations are intended to be included within the scope of the following claims.

### Use of the Pet Diaper Garment

The pet diaper in the present invention may be  
20 provided in several different size categories, such as small, medium and large. Within those general size categories, the garment may be further customized to fit an animal within those size categories. The design of the pet diaper garment allows it to be easily and  
25 conveniently put on and taken off of the animal.

The pet diaper garment is placed onto the animal by encircling the absorbent garment 20 around the torso of the animal. The animal's legs are placed through leg openings 80 and a tail opening is made by pressing  
30 through perforations 70 in the back section 30. The animal's tail may then be inserted through the opening made through perforations 70.

In an alternative aspect where the absorbent garment 20 opens along the back section, the absorbent garment 20  
35 is secured around the animal's torso. The absorbent

garment is also positioned around the tail and then secured along the top of the garment.

Once the absorbent garment 20 has been placed on the animal, bib straps 110 may be extended along the animal's chest, positioned around either side of the animal's head and neck, extended along the animal's back to connect with the absorbent garment 20. The absorbent garment 20 may be removed from the animal by removing the bib straps 110 from the absorbent garment 20 and removing the  
10 absorbent garment from the animal.